

**U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR QUALITY PLANNING AND STANDARDS
AIR POLLUTION TRAINING INSTITUTE**

EPA 450 Source Sampling for Particulate Pollutants December 11-15,2006

AGENDA

COURSE LOCATION Cal Poly State University San Luis Obispo, California	COURSE DIRECTOR Hal Cota, Ph.D., P.E., D.E.E. Cal Poly State University
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More information is available at <http://ceenve.calpoly.edu/cota/epa/Default.htm>

DAY/TIME	SUBJECT	SPEAKER
Monday, Dec 11		
8:30	Welcome and Registration	Cota
9:00	Pretest	Cota
9:45	Introduction to Source Sampling	Cota
	♦Objectives	
	♦Definitions	
	♦Pollutant Mass Rate	
	♦Gas Physics	
10:30	EPA Method 5 Sampling Train	Staff
11:30	Lunch	
1:00	Discussion of Laboratory Exercises	Cota
	♦Sample & Velocity Traverses for Stationary Sources	
	♦Determination of Stack Gas	
	♦Wet Bulb-Dry Bulb Moisture Estimation	
	♦Orifice Meter Calibration	
1:45	Laboratory Exercises	
	Station #1: Traverse Point Determination-Nozzle	
	Station #2: Pitot Tube Calibration	
	Station #3: Moisture Estimate	
	Station #4: Calibration of Orifice Meter	
	Station #5: Thermocouple & Thermometer Calibration	
	1. Complete Laboratory Exercises Calculations	
	2. Work Problems 2, 3, 4 & 5, p. D-2	

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DAY/TIME	SUBJECT	SPEAKER
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Tuesday, Dec 12

8:00	Homework Review	
8:30	Isokinetic Source Sampling	Cota
9:45	Setting the Isokinetic Sampling Rate	Cota
11:00	Preparing to calculate ΔH	Cota
11:30	Lunch	
12:30	Combustion analyzer with emission capabilities-stack Preliminary Traverse - stack	Wolf-All
2:00	♦ Review of Sample and Velocity Traverses	Cota
	♦ Reference Method Determination of Moisture in Stack Gas	
	♦ Gas Analysis for Carbon Dioxide, Excess Air and Dry Molecular Weight	Staff
3:40	Orsat Laboratory	Staff
	Homework:	
	1. Do Problems 1, 2, & 3 - Setting Isokinetic Sampling Rate - p. D-5	

DAY/TIME	SUBJECT	SPEAKER
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Wednesday, Dec 13

8:00	Homework Review	Staff
8:30	Calculation and Interpretation of % Isokinetic	Cota
	♦ Equations for % Isokinetic	
	♦ Evaluations Anisokinetic Source Test Results	
10:15	Definition of a Particulate	Staff
10:30	Break	
10:45	Discussion of Source Sampling Exercise	Cota
	♦ Experiment Design	
	♦ EPA Method 5	
	♦ Report Writing	
12:00	Lunch	
1:00	Stack Test - Cal Poly Steam Plant	All
	Homework:	
	1. Work problems 3 & 4 on p. D-9	

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DAY/TIME	SUBJECT	SPEAKER
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Thursday, Dec 14

8:00	Homework Review	
8:30	Concentration Corrections	Staff
9:00	Class Problems	Staff
	Break	
10:00	Quality Assurance	Winberry
11:00	Data Review	Cota
11:30	Lunch	
1:00	Calculation Review - Hand in Stack Test Summary	Cota
	Discussion of Laboratory Results	
3:00	Emission Measurement Instruments	Winberry
4:00	Resources	Cota
	Homework:	
	1. Read Pre Test	

DAY/TIME	SUBJECT	SPEAKER
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Friday, Dec 15

8:00	Review	Cota
8:30	Modified Method 5	Winberry
9:30	PM 10 Sampling-TEOM Series 7000	Winberry
10:45	Post Test	
12:00	Post test Review & Critique	Cota
1:00	Adjourn	